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17th March, 1959.

COCOM Document No. 3452B

5-General

COORDINATING COMMITTEE

RECORD OF DISCUSSION

ON

PROPOSED BELGIAN EXPORT OF TELEPHONE CABLES TO THE U.S.S.R.

9th March, 1959.

Present: Belgium(Luxembourg), Canada, Denmark, France, Germany, Italy, Japan, Netherlands, United Kingdom, United States.

References: COCOM Documents Nos. 3436 and Addendum, 3444, 3450 and 3451.

1. The CHAIRMAN recalled that in the course of the discussion on a proposed Belgian export of telephone cables to the U.S.S.R. held on the 4th March, the Committee had agreed to put preliminary questions to the Belgian Delegation at the present meeting. He further stated that the German and Italian Delegations had, in COCOM Documents Nos. 3450 and 3451 respectively, provided information on similar orders addressed to firms in their countries. Finally he invited delegates to question the Belgian Delegation on any points which they felt needed clarification.

2. The JAPANESE Delegate stated that he had no questions to put to the Belgian Delegation but recalled that, as he had already indicated (paragraph 11 of COCOM Document No. 3444), his Government attached great importance to this question. Certain Japanese firms had also received orders from the Soviet Purchasing Agency which were apparently similar to those mentioned by various delegations. The transaction was still in the trade negotiation stage, but the Japanese Government had already effected a preliminary study of the strategic aspect. The only details which the Japanese Delegation were able to provide at present were the following. The order involved a total length of 1,200 km. of cable having the following structure: 14 strands each consisting of 4 polyethylene-insulated copper wires (diameter 1.2 mm.) making up the shape of the star, and 5 wires (diameter 0.9 mm.) for signals placed among the strands. The overall sheath was made of lead.

3. The BELGIAN Delegate, in answer to the questions put during the previous meeting by the United Kingdom and United States Delegates (paragraphs 6 and 9 of COCOM Document No. 3444), stated that the cable ordered from Belgium was intended to equip a section of the Moscow-Vladivostock line and that the installation would be carried out by Russians technicians.

4. The UNITED KINGDOM Delegate stated that he had no particular questions to put, and indicated that his Government's first reaction to the Belgian request was distinctly unfavourable.

5. Replying to questions from the Belgian and German Delegates, the FRENCH Delegate explained that the order received by the French industry involved 450 km. of cable to equip the Moscow-Vladivostock line. A preliminary study of the Belgian case would seem to show that the cables concerned, which were similar to those in use on the Belgian railways, were also practically identical to those ordered from France and used by the S.N.C.F.

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The Delegate undertook to explain to the Committee, and to the Belgian Delegation in particular, how the competent French services had reached the conclusion that the cables ordered from France were covered by Item 4481 because of widespread developments in the field of railway control and signalling systems.

6. The BELGIAN Delegate wished to hear particulars of the study completed by the French experts.

7. The expert of the FRENCH Delegation stated that this order should be examined in connexion with the development of a railway line rather than from the communications point of view. Railway signalling techniques had developed considerably over the last twenty years. For, twenty years ago railway signalling systems were controlled mechanically and operators switched points by means of levers which worked the corresponding signals by continuous current electric relays. The transmission of signals over short distances therefore caused no difficulty. Later on, when railway traffic had been speeded up and the need to ensure maximum safety had duly increased, purely electromagnetic centralized traffic control systems had become necessary. These systems involved signal combinations and still used continuous current; there was a maximum of 16 combinations which differed with the varying length of the signals. It was then that difficulties began to arise with the need to transmit signals over longer distances up to 20, 40 and now 70 km. Since it was no longer possible to send direct continuous current signals through the cables, the S.N.C.F. had had to change its transmission systems and adapt them to low-frequency alternating currents. Accordingly the S.N.C.F. engineers had had to provide their signal cables with specifications closely resembling those of communication cables, without having the slightest intention of using communication frequencies and certainly not frequency-carrier systems. The maximum frequencies used were in the region of 2,000 to 4,000 c/s. The expert explained that if this order had been received 10 years ago it would have created no problem, because communications cables and signal cables were very different at that time. Nowadays, however, specifications for railway cables and for communications cables tended to resemble each other more closely, while remaining different in certain respects. It was obvious that the P.T.T., for instance, would not order cables having exactly the same specifications as those involved in this order.

8. In reply to a question from the German Delegate as to how modern signal cables could still be distinguished from communications cables, and as to whether or not the cables ordered for the Moscow-Vladivostock line could be used for communication purposes, the expert stated that it was clearly apparent that the cables involved were intended for installation along a railway line. This was particularly evident from the size of the protective covering which included a lead or aluminium sheath intended specially to reduce the effects of induction. The number of quads also clearly showed that the cables were not communications cables, for the P.T.T. had to adapt their cables to the needs of the towns serviced, while the S.N.C.F. had to adapt them to the signalling systems and stations along the route. For instance, according to the Belgian Memorandum, some circuits were charged at 140/83, which was a very heavy, low cut-off frequency charge enabling only a low speed of propagation, whence the formation of echos difficult to subdue. Such circuits had not been ordered for communication purposes for a long while. It should further be noted that, if the Russians used this cable for telephone communications rather than for signalling purposes, the railway could no longer be properly worked, and its efficiency would be appreciably reduced. As to the possibility of using the 6 uncharged quads for the transmission of carrier-frequencies, it was extremely limited since these quads did not meet the strict requirements of equilibration and diaphony necessary for long-distance telephone links. For this particular usage, it was only possible to connect equilibrated quads, i.e. those having


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very similar characteristics. It was obvious that if the Russians were able to equilibrate them, these cables could be used for communications. In the form in which they were ordered, however, these cables were certainly railway signal cables and not communications cables.

9. The UNITED STATES Delegate thanked the expert of the French Delegation for the explanations he had just given, but stated that he was not absolutely sure what technical conclusions should be drawn therefrom. He asked the French expert if it would be correct to say that the cable mentioned in the order received by France should be considered within the framework of Items 1526 and 4481. Technically speaking, this cable was covered by Item 1526 but, in view of the equipment needs of a modern railway line, it was used in the railway field. According to the French Delegation, it would then be more logical to regard it as covered in spirit by Item 4481 even if it were literally-speaking covered by Item 1526.

10. The FRENCH expert stated that, in the view of the competent French services, this cable was not covered by Item 1526 which referred to "communications cable". French scales included different categories for communications cables, power-conveying cables, railway signalling cables and automotive equipment cables, etc. If, therefore, developments in technique tended to make railway signalling cables and communications cables more alike, they still belonged to different categories.

11. The UNITED KINGDOM Delegate pointed out that Item 1526 covered "communication cable (.....) of any type", that submarine cable was likewise specifically covered and that there was no exclusion clause for railway signalling cables. It would thus appear that all communication cable "containing more than one pair of conductors and containing any conductor single or stranded exceeding 0.9 mm. in diameter" was covered by this item. The cables involved in the Belgian case contained 14 quads and conductors of 1.2 mm. in diameter, and thus clearly seemed to be covered by that item.

12. The GERMAN Delegate thanked the French Delegation for the clarification just provided, which would facilitate the task of the German authorities. The latter, however, had some difficulty in understanding how the cables could be covered by Item 4481, since the definition in English was "railway signalling apparatus".

13. The FRENCH Delegate remarked that the definition of this item in French was "système de signalisation ferroviaire", and it was perfectly normal to regard railway signalling cables as forming part of a railway signalling system.

14. The CHAIRMAN stated that he had a few comments to make at this stage as to the differences which might be found between the English text and the French text of the International Lists. As far as Item 1526 was concerned, there seemed to be no problem, since the English word "communications" had always been translated into French by "télécommunications". As far as Item 4481 - a new item - was concerned, the scope of the English word "apparatus" might not be absolutely identical with that of the French word "systèmes". It should be remembered, however, that where basic documents such as the International Lists and the texts of procedures were concerned, both French and English versions had the same authority. The Chairman recalled that when the Consultative Group had invited him to issue the new International Lists in both languages, he had stated officially that the Secretariat was not able to assume responsibility for the translation of the definitions into French. This translation had consequently been prepared with the help of French speaking technical experts, and a draft had been submitted to Governments in both languages, enabling the latter to compare the French and English versions so as to ensure maximum uniformity.



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15. The BELGIAN Delegate noted that the order received by the French industry concerned the Moscow-Vladivostock line and asked if this equipment would be sent to the same destination as the equipment ordered from Belgium. Furthermore, was it right to assume that the cables involved would be used mainly for signalling purposes and, in the second place only, for telephone communications between stations ?

16. The FRENCH expert did not know whether or not the cables ordered from France were intended for the same purpose as those ordered from Belgium. He replied in the affirmative, however, to the Belgian Delegate's second question.

17. The ITALIAN Delegate reserved the right to revert to the very important question of interpretation to which this case had given rise. He asked the French expert if outmoded railway signal cables were replaced by coaxial cables. Could the French Delegation further indicate whether, to their knowledge, non-member countries of the Coordinating Committee produced the type of cable under consideration on an industrial scale ?

18. The FRENCH Delegate stated that there was in fact a tendency to replace railway signalling cables by coaxial cables. While he had no specific information on the Italian Delegate's second question, the expert believed that countries like Czechoslovakia and Hungary, for instance, probably produced these cables industrially.

19. The CHAIRMAN thanked the French Delegation on behalf of the Committee for the contribution made by their expert to the discussion and recalled that, on the 18th March, Member Governments would be invited to make known their reply on the Belgian case, and that a technical exchange of views as to the interpretation of Items 1526 and 4481 would also take place.



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